Making sure your vote does not count: Green activism & insincere proxy voting

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Question

- Environmental and social (ES) objectives
  - firm actions affect shareholders' utility through the ES channel
  - so shareholders may be willing sacrifice some financial gains to further ES objectives
  - ES proposal: socially beneficial yet financially costly
  - ES proposer: green activist (e.g., Engine No.1 & TCI)

- Question: How do
  - shareholders vote on ES proposals submitted by green activists?
  - especially when they are strategic blockholders with reputational concerns?

- How we answer this question
  - build a model of activist intervention and strategic shareholder voting

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Facts: Owners

- Large institutional universal owners
  - own >45% of almost all S&P 500 firms (Amel-Zadeh et al, 2022)
  - hold largest ownership block in 88% of S&P 500 firms (Fichtner et al, 2017)
- "Three kings": Vanguard, BlackRock and State Street
  - own 25% of almost all S&P 500 firms (Coffee Jr, 2021)
  - hold largest ownership block in 75% of S&P 500 firms (Amel-Zadeh et al, 2022)
- Undiversified blockholders (families/managers)
  - own dominant blocks in <5% of S&P 500 firms
  - size of shareholding declining over time
- Small diversified investors
  - own <10% of shares

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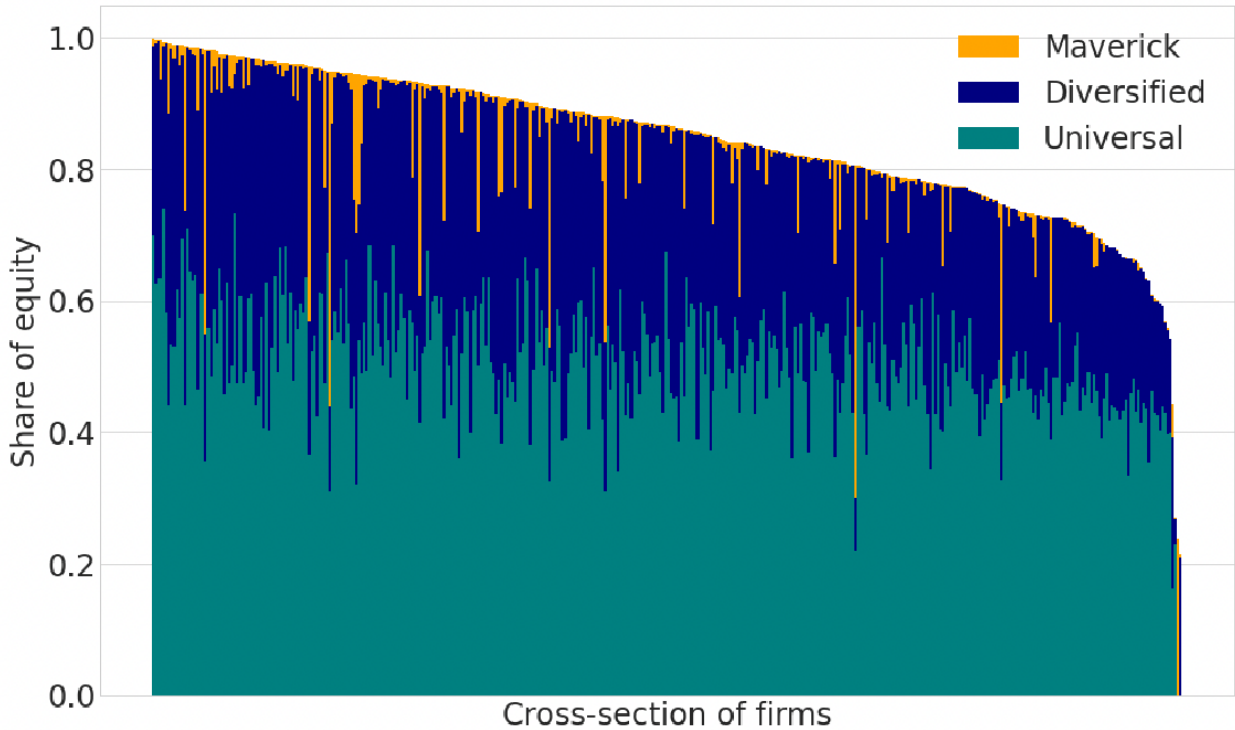

Ownership structure of S&P 500 (Amel-Zadeh et al, 2022)

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  - always vote (Brav et al, 2022)
  - either support or oppose proposals with all of their proxy votes
  - appear to vote strategically rather than sincerely (Michaely et al, 2021)
- Undiversified blockholders
  - almost always vote
- Small shareholders
  - 11% of retail accounts cast votes (Brav et al, 2022)
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Facts: Activists

- Bluebell Capital, Children's Investment fund (TCI), Engine No. 1, ...
- Submit proposals that call for concrete changes in operating policies or board composition
- Small cap funds
- Very small target holdings relative to other blockholders
- Submit many proposals
- Low probability of success (Barko et al, 2021)
- Success not correlated with size of share holdings (Barko et al, 2021)

Model world: Owners

- Universal owners may value ES goals
  - and be willing to accept firm value reductions to further them
- Universal owners may not value ES goals, but the reputational costs of opposing ES proposals can exceed the financial cost of passage
  - investor withdrawal of funds
  - sanctions imposed by state governments
  - catering: Dimson et al. (2015), Wang (2021), Ramelli et al. (2021)
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- Similar to conventional activist
  - formulate a viable proposal
  - acquire shares
  - launch a campaign to ensure adoption of proposal, or shy away

- Different to conventional activist
  - conventional: current shareholders capture the value-add produced by the proposal by holding their shares
  - for ES proposals...the opposite!
  - activist success is negatively correlated with firm profits
  - selling shareholders factor in and ask for a lower price
  - green activist intervenes more effectively
  - existence of pseudo-green activists

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This paper

- Model green activists' proxy campaigns
  - activist: acquire shares, attempt a campaign (cost + likelihood of passing)
  - universal owners: determine whether proposal passes
  - atomistic owners: have no effect on the success of activism

- Model struggle for control between shareholders
  - green owners: concerned with carbon emissions
  - brown owners: only concerned with monetary payoffs
  - green sentiment: prior likelihood that a universal owner is green
  - reputation costs: owners face costs if voting against proposals
    - it's in the collective interest of green owners for the proposal to pass
    - it's in the collective interest of brown owners for the proposal to fail, but each brown owner prefers that the other owners bear the reputation costs of opposing
  - problem: owners don't know which other owners are brown
  - voting: strategic

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Main findings

- As long as there is some (albeit small) probability that some owners are green, proposals pass with positive probability
- When universal owners are unlikely to be green, many proposals are advanced but few pass
- Increasing green sentiment does not reliably increase the pass probability
- Increasing reputation costs/Concentrating reputation costs on the universal owners most susceptible to pressure reliably increases the pass probability
- Despite the free-rider problem, in some cases, a few universal owners are better able to resist green proposals than a single universal owner

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- When green sentiment is high: all-capitulation strategies
  - increasing green sentiment increases passing probability
  - concentrating ownership increases brown welfare
- When green sentiment is moderate: all-resistance strategies
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- When green sentiment is low: partial-resistance strategies
  - increasing green sentiment can decrease passing probability
  - concentrating ownership can reduce brown welfare
- When base level of green sentiment is low, outside reputational pressure is usually a more effective means than converting browns into greens (Engine No. 1)

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Voting literature

- Existing literature: effect of strategic voting on either
  - information aggregation (Feddersen and Pesendorfer, 1997),
  - preference aggregation (Passim, Borgers and Li, 2019),
  - preference aggregation in ESG context (Hart and Zingales, 2017);

- Our paper: effect of strategic voting when
  - voting is public and by blockholders,
  - preferences are simple,
  - all private information concerns idiosyncratic agent preferences (brown or green)

Green/Brown literature

- Existing literature:
  - firm is either controlled by a green or brown owner (Gupta et al, 2021), or
  - struggle for control: control transferred through acquisition (Jagannathan, et al, 2022);

- Our paper:
  - preferences of controlling owners' private information,
  - struggle for control: voting not acquisition

Finance literature

- Corporate ES activisms/policies:
  - empirics: Bolton and Kacperczyk (2021), Naaraayanan et al. (2021),
  - theory: broad green preference (Gupta et al, 2022), narrow green preference (Goldstein et al, 2022)
- Institutional ownership:
  - Amel-Zadeh et al. (2022), Coffee Jr (2021)
- Social pressure and catering:
  - Wang (2021), Ramelli et al. (2021), Dimson et al. (2015)
- Share acquisition and free riding:
  - Grossman and Hart (1980), Holmström and Nalebuff (1992)

Time line

Activist decides whether to initiate activism;

If initiating, he pays c to acquire shares using all the fund b, at price p_0.

Nature provides a proposal;

If activist makes proposal, the passing probability will be determined by vote;

If no proposal is made, activist holds until the end.

If campaign is launched, shareholders vote on the plan;

If passed, the reforms will be implemented.

Firm value is realized;

Everyone consumes the green and brown benefits.

Setup

- [Nature's first move]
  - π: probability of an activist identifies a proposal acceptable to green owners
  - payoffs: green payoff $G(x)$, financial payoff $V(x)$

$$x = \begin{cases} S & \text{proposal is voted and passes} \\ F & \text{proposal is voted and fails, or no proposal is made} \end{cases}$$

  - $G(S) > G(F)$ and $V(S) < V(F)$

- [Nature's second move]
  - nature independently draws whether a universal owner is green or brown
  - green sentiment γ: probability that a owner is green
  - the draw is private information: owners cannot see others' types

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Actors

- [Universal owners]
  - voting decision: $v_i = Y$ or N
  - probability of voting yes when brown: σ_i
  - determine the probability of passing: ρ (endogenize in voting game)

- [Atomistic owners]
  - sell shares to activist
  - at price: $p_0 = \pi\,\rho\,V(S) + (1 - \pi\,\rho)\,V(F)$

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Utilities

- [Activist]

$$u^A(x) = \beta\, G(x) + n^A\, V(x), \qquad x \in \{S, F\}$$

- [Green universal owner]

$$u_i^G(x) = \beta\, G(x) + n^U\, V(x) - r_i\, \mathbb{1}_{\{v_i = N\}}(v_i)$$

- [Brown universal owner]

$$u_i^B(x) = n^U\, V(x) - r_i\, \mathbb{1}_{\{v_i = N\}}(v_i)$$

Voting outcomes

- [Universal owner decisive]
  - proposal passes if and only if $m = \lfloor K/2 \rfloor + 1$ vote 'yes'

- [Marginality]
  - an owner is marginal if $m - 1$ other owners vote in favor of the proposal
  - brown owners trade off reputation costs with share value reduction conditional on being marginal
  - all brown owners prefer failure despite reputation costs

- [Free-rider effect]
  - shareholders internalize all reputation costs but only the effects of proposal passing when they are marginal
  - marginality falls as the number of universal owners increases

- [Insincere voting]
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Nash equilibria & potential maximizers

- [Our potential function]

$$\Pi(\boldsymbol{\sigma}) = \sum_{k \in \mathcal{K}} \sigma_k \, r_k - \Delta w \frac{\mathbb{P}[S(t(\sigma_1), ..., t(\sigma_K)) \geq m]}{1 - \gamma}$$

$$\partial_{\sigma_i} \Pi = \partial_{\sigma_i} u_i^B$$

- [Potential game]
  - any local potential maximizer is a Nash equilibrium
  - a potential maximizing pure-strategy equilibrium always exists
  - mixed strategy equilibria are almost never potential maximizers
  - we focus on pure strategy potential maximizing Nash equilibria

- [Optimal strategies]
  - o: number of owners assigned 'yes' votes when brown
  - $o \leq m - 1$ or $o = K$
  - $(r_{[1]}, r_{[2]}, r_{[3]}, \ldots, r_{[K]})$: ordered, high-to-low, by reputation costs
  - subset of owners who vote 'yes' when brown equals $\{r_{[1]}, r_{[2]}, ..., r_{[o]}\}$

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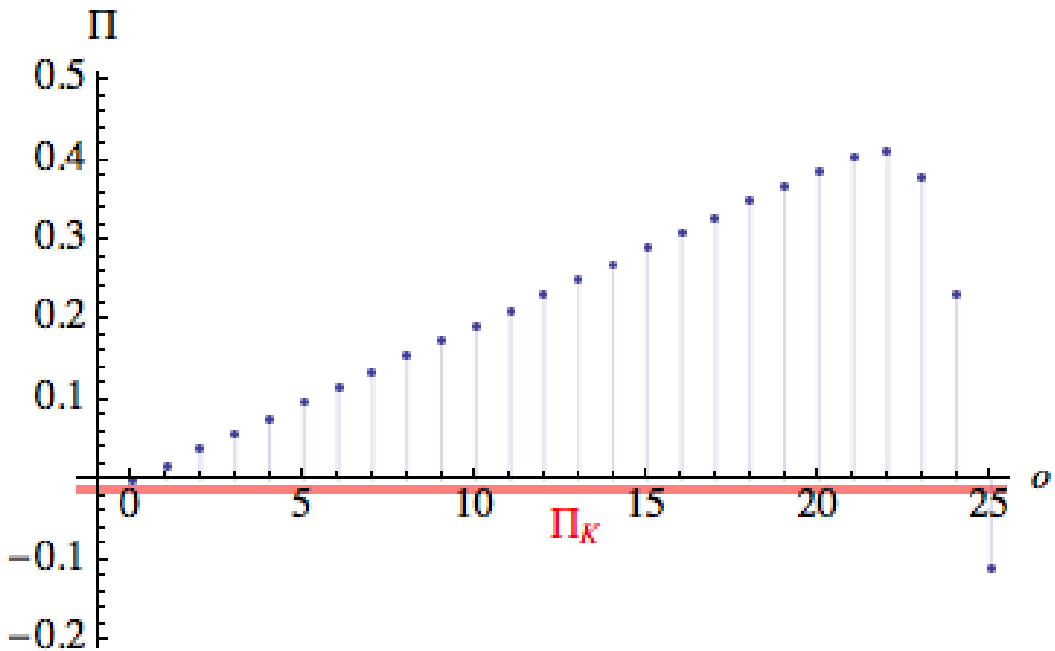
Low green sentiment

- Π_o is concave
- Optimal: partial resistance strategies

$K = 51,\ m = 26$



$\gamma = 0.034,\ o^* = 22$

Medium green sentiment

- Π_o is concave-then-convex
- Optimal: partial resistance strategies

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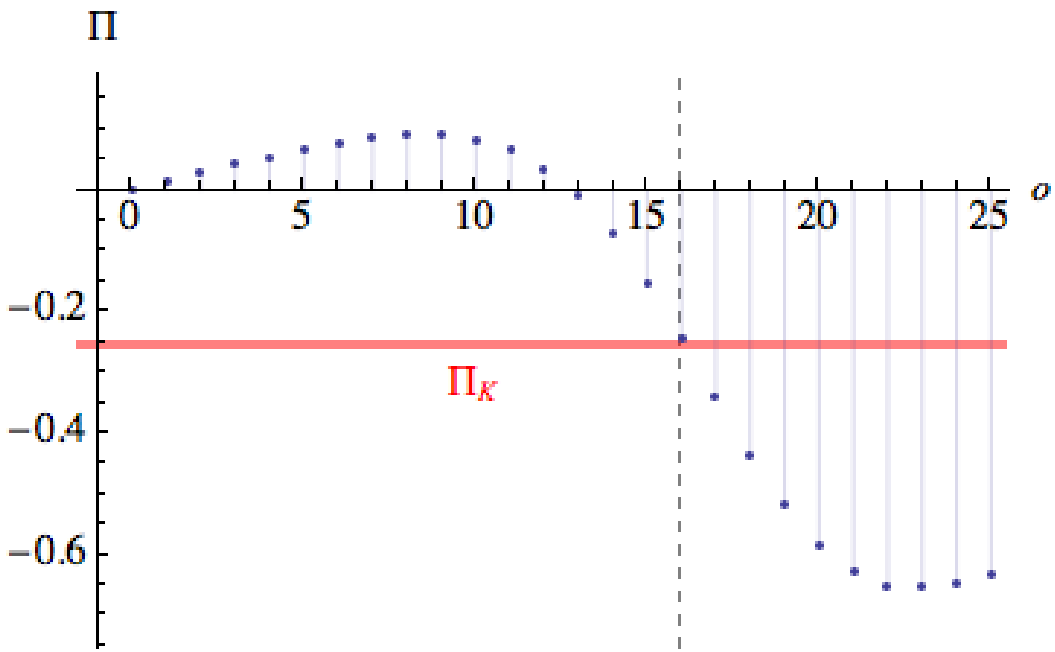

$\gamma = 0.269,\ o^* = 8$

High green sentiment

- Π_o is convex
- Optimal: extreme strategies—all-resistance or all-capitulation

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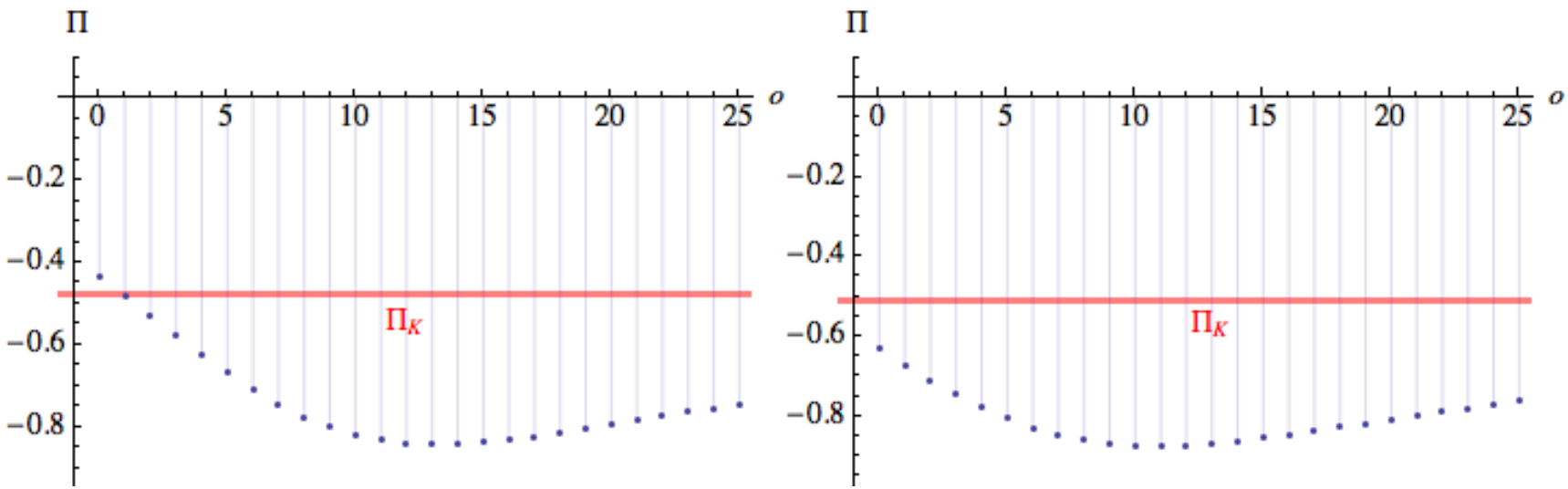


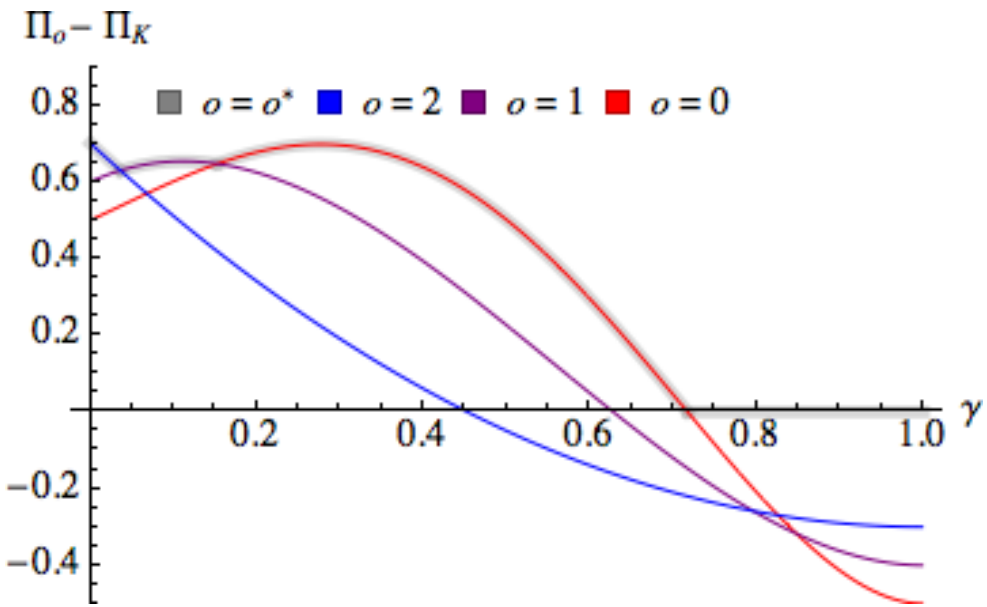
(a) $\gamma = 0.488,\ o^* = 0$ (b) $\gamma = 0.523,\ o^* = K$

Non-monotonicity & the potential

As green sentiment γ increases:

- first increase resistance $o^* = m-1 \to m-2 \to \cdots \to 0$
- then capitulate $o^* = K$

$$K = 5,\ m = 3$$



Optimal = "upper envelope"

Pass probability w.r.t. green sentiment

As green sentiment γ increases:

- the pass probability is not monotonically increasing in green sentiment

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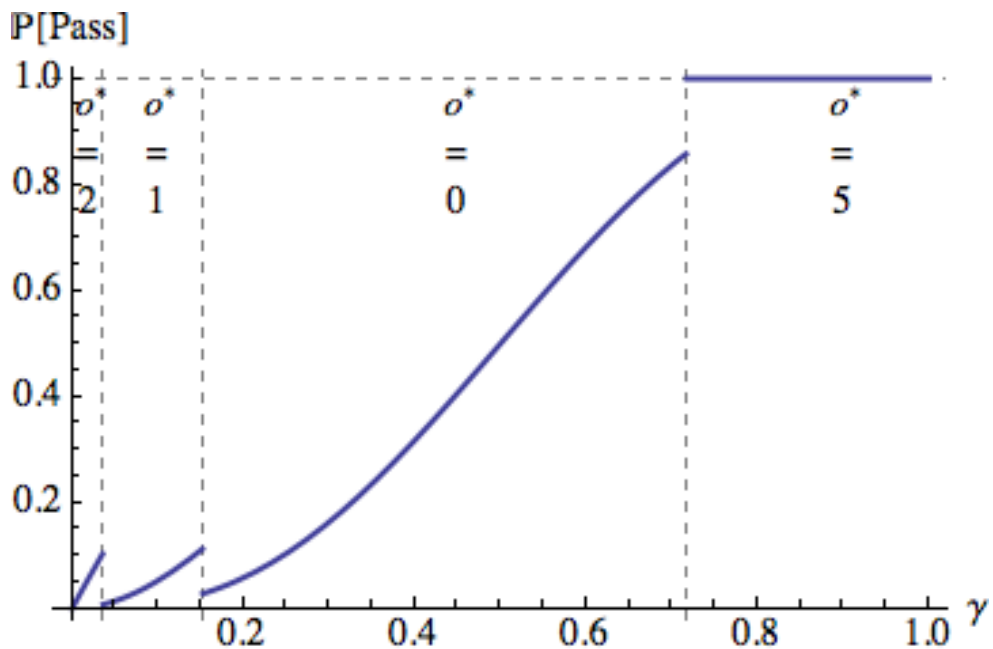

Optimal o^* and probability of passing

Green sentiment and reputation costs

- Level of green sentiment
  - potential function decreases with green sentiment
  - non-monotonic effect on number of 'yes' votes assigned
  - non-monotonic effect on probability of passing
- Reputation costs
  - potential function increases with reputation costs
  - number of 'yes' votes assigned increases with reputation costs
  - probability of passing increases with reputation costs
- Dispersion of reputation costs
  - in general, ambiguous effect on probability of passing
  - however, probability of passing increases when dispersion takes the form of a high-low reputation cost spread
  - high-low cost spread: transfer reputation costs from the m owners with the lowest reputation costs to the $m-1$ owners with the highest reputation costs

Number of universal owners

- Effects of increasing number of universal owners
  - free-rider effect lowers brown resistance and monetary payoffs
  - however, when green sentiment is low:
    - law of large numbers effect increases the probability that all-resistance succeeds $\rightarrow$ dispersion makes resistance more effective
    - strategic voting effect appreciably reduces total reputation costs while negligibly increasing passing probability $\rightarrow$ dispersion increases monetary payoffs
- A small clique of universal owners sometimes results in more effective brown resistance and higher monetary payoffs than a single owner

Extensions: Pseudo greens

- Question: What if brown agents feign being green and launch campaigns, drive down the price of shares but not follow through with a proposal, thereby capturing a capital gain?
- Will pseudo greens drive out green activists?
- Not always: if the mass of brown agents is sufficiently large
  - as pseudo greens enter, premium earned by pseudo-green opportunism falls
  - if there are enough pseudo greens, the premium falls until it equals campaign initiation costs before greens are driven out

Extensions: Heterogeneous green sentiment

- Question: What if the different owners have different probabilities of being green?
  - the model becomes much more complex
  - the game becomes a generalized potential game: a weighed potential game
  - if higher green sentiment owners have higher reputation costs, basic strategy characterizations are robust to heterogeneous sentiment levels
  - heterogeneity, under rather complex conditions, can either increase or decrease brown resistance

Extensions (in progress): Crypto-greens

- Question: What if beneficial fund owners (retail fund investors/pension funds) have brown preferences over corporate policies?
  - BlackRock: lost billions from state pension funds and others pulling out of ESG funds while it has taken a brand beating for its support of ESG
  - green universal owners have an incentive to sometimes insincerely oppose green proposals
  - results that mirror our baseline model

- Other suggestions?